

# **Search for Chiral Magnetic Effect with Identified Particles in Au+Au Collisions at $\sqrt{s} = 39$ GeV from RHIC/STAR**

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## **Abstract**

Chirality imbalance could occur in local domains inside the deconfined quark-gluon plasma created in high-energy heavy-ion collisions and, in the presence of a strong magnetic field, it will induce an electric charge separation along the magnetic field direction, owing to the chiral magnetic effect (CME) [1]. Previous azimuthal-angle correlation measurements with unidentified charged particles have manifested charge separation signals consistent with prediction of the CME [2]. But the magnitude of the background contribution has not been understood.

In this poster, we present the correlation results with identified particles (protons and pions) using STAR data of 39 GeV Au+Au collisions. The results will be compared with those of Au+Au at 200 GeV, as well as the published results of unidentified particles at 39 GeV.

## **References**

- [1]D. Kharzeev, Phys. Lett. B **633** (2006) 260.
- [2]L. Adamczyk et al., Phys. Rev. Lett. **113** (2014) 052302.